ABSTRACT

METHOD AND SYSTEM FOR SELECTIVE MEMORY COALESCING ACROSS MEMORY HEAP BOUNDARIES

[0031]   A method and system for efficient coalescing of memory blocks across memory heap boundaries in multiprocessor or multithread computer system. Blocks of memory are allocated into multiple heaps for exclusive utilization by separate processors or processes. Varying memory requirements result in fragmentation and increased memory utilization over time and coalescing of memory is necessary. An identification of each memory heap which contains a preceding adjacent memory block and a succeeding adjacent memory block is maintained for all memory blocks. Thereafter, each time a memory block is freed it may be coalesced across heap boundaries with an adjacent preceding or succeeding memory block by temporarily locking access to only those memory heaps containing a free preceding or succeeding adjacent memory block.